QGE 100

DVI/RGB COMPUTER SCREEN CAPTURE IP ENCODER

- **Stream RGB or DVI computer-video screen captures to the Quantum® Elite over an IP network**
- **Allows simple connection of a DVI or RGB source to an IP network**
- **Uses existing network or a dedicated media network with standard, routable IP packets**
- **Lossless compression with 4:4:4, 24-bit color source reproduction maintains image fidelity while minimizing network bandwidth**
- **Compatible with DVI input resolutions up to 1920x1200 and analog RGB input resolutions up to 1600x1200**
- **Auto-sensing and flexible signal acquisition circuitry simplifies installation for both standard and non-standard sources**

The Extron QGE 100 Quantum® Graphics Encoder captures RGB or DVI input signals from PCs or other graphic sources, and streams them to the Quantum Elite videowall processor over an IP network. It provides high scalability, allowing hundreds of low-motion graphic sources to be interfaced to Quantum Elite. The QGE 100 applies high performance, lossless compression with 4:4:4, 24-bit color source reproduction while using low bandwidth streaming into a Quantum Elite processor or QGE 100 Viewer software.

DESCRIPTION

The Extron **QGE 100** Quantum® Graphics Encoder is used to stream RGB or DVI screen captures from PCs or other graphic sources to Quantum Elite videowall processors. It provides high scalability, allowing hundreds of sources such as maps, data screens, and other low-motion graphic input signals to be interfaced to Quantum Elite over an IP network. The QGE 100 applies high performance, lossless compression with 4:4:4, 24-bit color source reproduction while using low bandwidth streaming into a Quantum Elite processor or QGE 100 Viewer software.

The QGE 100 features a robust, embedded solution utilizing a high performance digital signal processor. It connects between the source PC and its display, and imposes no additional load on the source machine CPU performance.

The QGE 100 incorporates input format auto-sensing and flexible signal acquisition circuitry to automatically detect standard signal formats. Custom input resolutions can be created with factory support from Extron when a system must interface with more unique source types.

The included QGE 100 Viewer software provides the added flexibility of monitoring content captured from source PCs on the same IP network. The administrator software, also included with the QGE 100, provides control over network connections, device addresses, and bandwidth management of QGE 100 units.

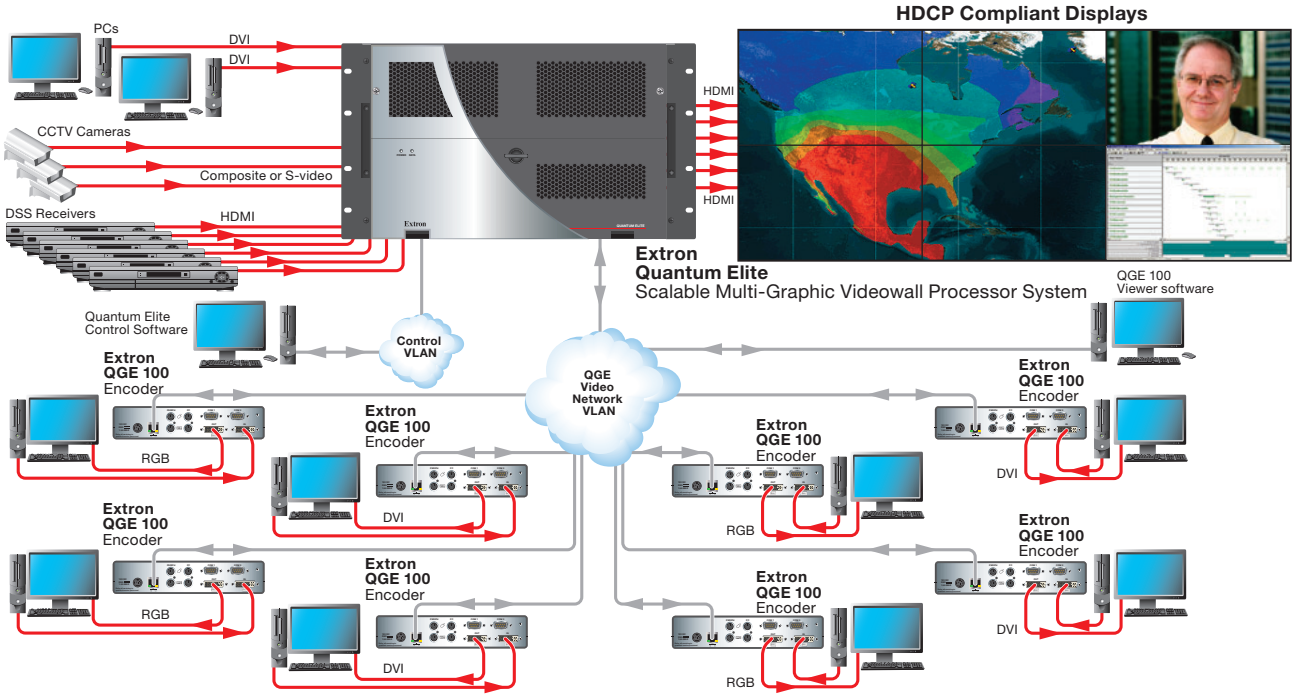
Multicast streaming is used when a QGE 100 source is decoded at one or more Quantum Elite frames or PCs running QGE 100 Viewer software. Unicast streaming to a PC running QGE 100 Viewer software allows for remote keyboard and mouse control of the source PC.

FEATURES

- **Stream RGB or DVI computer-video screen captures to the Quantum Elite over an IP network**
- **Allows simple connection of a DVI or RGB source to an IP network**
- **Uses existing network or a dedicated media network with standard, routable IP packets**
- **Lossless compression with 4:4:4, 24-bit color source reproduction maintains image fidelity while minimizing network bandwidth**
- **Compatible with DVI input resolutions up to 1920x1200 and analog RGB input resolutions up to 1600x1200**
- **Auto-sensing and flexible signal acquisition circuitry simplifies installation for both standard and non-standard sources**
- **Operates independently of source machine operating system and hardware**
- **Imposes no additional load on the source machine CPU performance**
- **Image compression and user-defined bit rate settings limit network traffic**
- **Interface hundreds of DVI or RGB inputs into the Quantum Elite**
- **Decode up to 28 QGE 100 streams per Quantum Elite card frame**
- **Provides scalability by multicasting graphic inputs to multiple Quantum Elite card frames or PCs running QGE 100 Viewer software**
- **Intended for use on LANs or managed private networks that support multicast traffic**

Input Scalability for Quantum Elite Systems

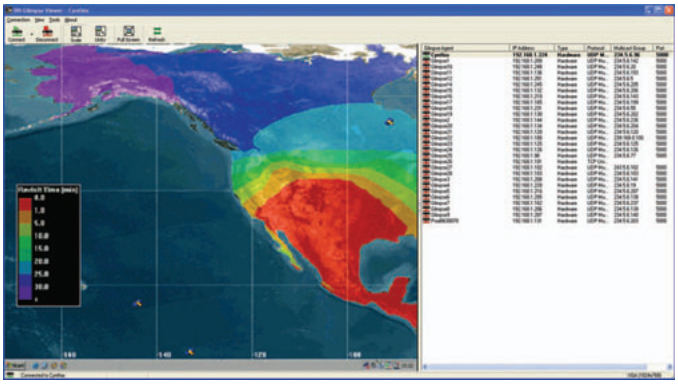
The QGE 100 allows hundreds of sources to be accessible to a Quantum Elite processor, providing high input scalability for computer-video sources.



SOFTWARE

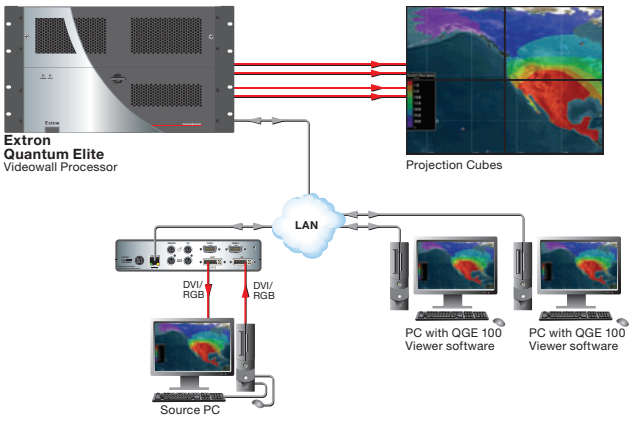
The QGE 100 is supplied with administrator and viewer software. The administrator software provides control over network connections, IP addresses, and bandwidth management of QGE 100 units. Sorting and grouping options facilitate easy management for large numbers of units. QGE 100 streams can also be viewed from the QGE 100 administrator software.

The QGE 100 Viewer software, also included with the QGE 100, allows any computer connected to the media network to view streamed sources.

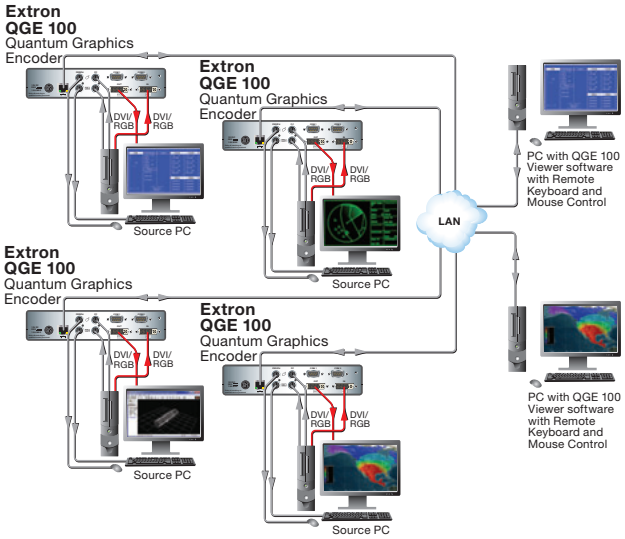


QGE 100 Viewer Software

APPLICATION DIAGRAMS



Stream to many destinations in multicast mode



Remotely control source PC's keyboard and mouse in unicast mode

QGE 100 Multicast Streaming

Operating in multicast mode, a QGE 100 streams a PC input to multiple destinations simultaneously. In this application, the streamed output from the QGE 100 is decoded by a Quantum Elite videowall processor and two PCs using QGE 100 Viewer software.

QGE 100 Unicast Streaming

Operating in unicast mode, a QGE 100 supports only one endpoint connection. Unicast streaming allows a user at the destination PC to view the stream, as well as control the keyboard and mouse of the source PC if they are connected through the QGE 100.

SOURCE CAPTURE FOR QUANTUM® ELITE

When used with the Quantum® Elite videowall processor, the QGE 100 provides a flexible means to capture sources for display on the videowall.

Hundreds of sources can be transported across an IP network and then input to the Quantum Elite via a single Gigabit Ethernet connection. Up to 28 of these QGE 100 sources can be displayed at any one time per Quantum Elite processor.

Capturing static or low-motion sources with the QGE 100 not only provides pixel-perfect, 4:4:4 source reproduction, but it also makes

highly efficient use of the Quantum Elite video/graphic RAPT bus. This leaves greater capacity for high-motion sources connected to the Quantum Elite HDMI, DVI, RGB, or video input cards.

SPECIFICATIONS

VIDEO INPUT

Number/signal type	1 analog or digital VGA-WUXGA RGBHV, RGBS, RGsB, single link DVI input with 1 loop-through
Connectors	2 female DVI-I
Impedance	75 ohms
Horizontal frequency	31.4 kHz to 100 kHz
Vertical frequency	50 Hz to 85 Hz
Resolution range	640x480 to 1920x1200* *1920x1200 is accepted for DVI-D single link, reduced blanking only
Formats	RGBHV, RGBS, RGsB, digital video

VIDEO PROCESSING

Maximum pixel clock	165 MHz
Digital sampling	24 bit, 8 bits per color, 165 MHz standard
Colors	16.78 million

SYNC

Input type	RGBHV, RGBS, RGsB
Input level	2.75 V to 5.0 Vp-p for RGBHV 0.3 Vp-p for RGsB

CONTROL/REMOTE — PROCESSOR/ENCODER

Serial host control ports	2 RS-232, rear panel 9-pin male D connectors
Keyboard/mouse ports	2 PS/2 mouse ports (female 6-pin mini DIN): 1 input, 1 loop through 2 PS/2 keyboard ports (female 6-pin mini DIN): 1 input, 1 loop through
Ethernet ports	1 female RJ-45 connector
Ethernet data rate	10/100Base-T, half duplex with autodetect
Ethernet protocol	IP, TCP, UDP, DHCP
Ethernet default settings	Link speed and duplex level = autodetected IP address = 172.28.231.98 Subnet mask = 255.255.0.0 Gateway = 0.0.0.0 DHCP = off
Program control	Extron QGE 100 control/configuration software for Windows®

GENERAL

Power supply	External Input: 90 VAC to 264 VAC, 50-60 Hz Output: 12 VDC, 1.5 A, 18 watts
Power input requirements	15 watts, 12 VDC
Temperature/humidity	Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing
Cooling	Convection, no vents
Mounting	
Rack mount	Yes
Enclosure type	Metal
Enclosure dimensions	1.75" H x 7.9" W x 6.1" D (1U high) (4.4 cm H x 20.1 cm W x 15.6 cm D) (Depth excludes connectors.)
Product weight	1.4 lbs (0.6 kg)
Shipping weight	5 lbs (3 kg)
Regulatory compliance	
Safety	CE, c-UL, UL
EMI/EMC	CE, FCC Class A
Environmental	Complies with the appropriate requirements of RoHS, WEEE.
MTBF	30,000 hours
Warranty	3 years parts and labor

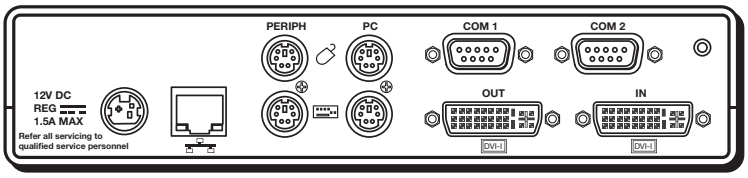
NOTE: All nominal levels are at ±10%.

Model	Version Description	Part number
QGE 100	Quantum Graphics Encoder	60-1113-01
QGE 100 PS	QGE 100 Replacement Power Supply	70-754-01
QGE 100 RMK	QGE 100 Rack Mount Kit - Front Plate	70-755-01

For complete specifications, please go to www.extron.com
Specifications are subject to change without notice.

PANEL DRAWINGS

Front



Rear

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